RAC Response to the House of Lords Science and Technology Committee

This response has been written by Nicholas Lyes, RAC Public Affairs Manager, on behalf of RAC Motoring Services

About the RAC

With more than eight million members, the RAC is the oldest and one of the UK's most progressive motoring organisations, providing services for both private and business motorists. As such, it is committed to making driving easier, safer, more affordable and more enjoyable for all road users.

The RAC, which employs more than 1,500 patrols, provides roadside assistance across the entire UK road network and as a result has significant insight into how the country's road networks are managed and maintained.

The RAC is separate from the RAC Foundation which is a transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to roads and their users.

The RAC website can be found at www.rac.co.uk.

In September 2016, the RAC published its latest Report on Motoring.

RAC Response

1. **What are the potential applications for autonomous vehicles?**

1.1   Potentially, in the longer term, autonomous vehicles could address any application currently fulfilled by conventional vehicles with the exception of those journeys undertaken entirely or largely for the pleasure of driving. However, early applications are likely to include localised applications such as goods deliveries, taxi services and mobility services for the disabled, the elderly and others unable to drive themselves. It is also likely that longer distance journeys for commercial vehicles, where fuel savings from platooning offer the prospect of significant cost savings, are likely to be an early target.

2. **What are the potential user benefits and disadvantages from the deployment of autonomous vehicles?**

2.1   Each year, The RAC publishes its Report on Motoring. Now in its 28th year, the Report is an extensive nationwide survey of a representative cross-section of UK motorists to find out what is on their mind and where their priorities on road policy lie. It informs Government and policy makers with considerable insight into the attitudes of the UK motorist and what is high on their agenda. Over the past 2 years, we have asked a series of questions to gather motoring opinion on the subject of driverless vehicles, and this year in particular we targeted specific aspects in line with the Government's priorities on the matter. Our research found that most motorists (76%) do

not expect driverless cars to become available to the public before the end of the current decade, while only half (49%) expect sales of new autonomous vehicles to outnumber those of conventional models by 2070.

2.2   The research also showed concerns about areas which are considered benefits by some policy makers. For example, 70% of respondents were concerned about the reliability of the software that driverless vehicles will use, with 66% admitting concerns that computer software of a driverless vehicle may be "hacked".

2.3   There is also a suggestion that motorists may not be ready for driverless vehicles. A majority (63%) admitted that they are scared by the prospect of driverless cars on the road, whilst only one in four (25%) said they were looking forward to travelling in a driverless car (with 48% saying they weren't). In addition, only 27% say they are excited by the thought of driverless cars on the road, as opposed to 35% who say they are not.

2.4   There is also concern that increasingly autonomous vehicles will begin to impact upon driving quality. 51% believe the new technologies will lead to complacency amongst drivers and potentially more accidents, although this is down from 59% in 2015. This is despite the contribution that driver error is known to make to casualty rates on today's roads.

2.5   One in four drivers believe that driverless cars will reduce the number of traffic jams on the road, however a larger proportion (35%) disagreed.

2.6   There were, however, some positive findings in relation to mobility. 62% agreed that driverless cars will improve personal mobility for disabled or elderly drivers, an increase on the 52% who responded the same way when questioned in 2015.

2.7   The RAC believes that there are potentially many benefits for motorists from increasingly autonomous vehicles, and eventually fully driverless vehicles. These include safer roads through reduced road traffic accidents, reduced congestion through smoother traffic flow and increasingly intelligent technology. However, it appears this messaging is not understood by the majority of road users. There are also significant questions that need to be addressed on liability when fully autonomous vehicles are on our roads and we await with interest Government proposals which we understand will form part of the Modern Transport Bill. There is rightly an emphasis on ensuring that that the UK is a technology leader and that the resulting vehicles are reliable and safe from cyber-attacks, we would urge policy makers to place equal emphasis on communicating the benefits that driverless vehicles will deliver for users and for society as a whole. We would also urge Government, manufacturers and developers to engage fully with the motoring public, including involving motorists in the pilot programmes, so that they gain confidence in the reliability and resilience of the technology.

3. **Are further revisions needed to insurance, regulation and legislation in the UK to create an enabling environment for autonomous vehicles?**

3.1   Progress towards fully autonomous vehicles is likely to be evolutionary, rather than revolutionary, and insurance and legislation needs to recognise that for a long time there will be a mix of vehicles on our roads with different levels of autonomy.

3.2   Where a fully or partially autonomous vehicle causes an accident then liability should reside with the vehicle manufacturer rather than with the user. However, to establish liability in such situations, it will be necessary to access the data stored by each of the vehicles involved in a collision. This raises issues of who owns the data and who has right of access to the data. We need to avoid a situation where product liability lies with the vehicle manufacturer but users of fully autonomous vehicles still need insurance to cover those situations where liability for a product failure cannot be established because one of the parties declines access to data stored by their vehicle.

3.3   It is also difficult to estimate how insurance premiums will be affected. It is expected that fully autonomous vehicles will be involved in far fewer accidents than today's vehicles and so in principle the cost of insurance will fall and much of the burden will shift from liability of a driver to product liability of the manufacturer. However, this is dependent on a robust regulatory framework that enables liabilities to be established.

3.3   Given the complexities of having separate strands of cover, amending Part 6 of the 1988 Road Traffic Act (as outlined in a recent Government consultation) to extend compulsory insurance requirements for automated vehicles to require the owner to ensure that there is an insurance policy in place that covers the manufacturers' and any other entities' product liability seems sensible. We believe this would be within a framework that the motorist is familiar with.

4. **What is the scale of the market opportunity for autonomous vehicles?**

4.1   The RAC is not in a position to answer this fully. However we urge those involved in the development of driverless vehicle technology to take note of the RAC's research on road user opinion as these opinions will invariably have implication on market opportunity and take-up.

5. **Will successful deployment of autonomous vehicles require changes to digital or physical infrastructure?**

5.1   The RAC is not in a position to answer this fully. However we expect autonomous systems to place demands on the physical infrastructure. For example, some lane departure warning systems function by capturing images of painted white lane-demarcation markings. However, where these are faded, this could potentially compromise the effectiveness of the system. Going

forward, therefore it will be necessary for highways and local authorities to recognise any more stringent demands placed on the physical infrastructure by autonomous vehicle technology when planning maintenance or developing improvement schemes.

RAC Contacts should the committee require any further information

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